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CDM Programmes of Activities: A Bridge towards New Market Mechanisms?

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Five years ago, at the Montreal Climate Summit, Parties to the UNFCCC kickstarted the inclusion of Programmes of Activities (PoA) into the CDM. The basic idea was to open the CDM to previously untapped small and micro sources of GHG emissions. However, the CDM Executive Board (EB) has registered only three PoAs so far and the pipeline is growing slowly. In this article, barriers hampering the development of PoAs are described, a new guidebook with programme blueprints is presented and the connection of PoAs and possible future markets mechanisms is analysed.

PoAs now allow the use of CDM carbon finance for a large number of small, individual measures that each alone cannot carry the CDM transaction costs. These comprise, for example, efficient household cookers, solar-powered water heating systems, energy-efficient equipment, machinery or motor vehicles, the use of biogas in agriculture, and energy-efficient buildings. A vast potential for these decentralised activities can be found in rural regions in Africa, East Asia and the Pacific Region. Therefore, many hope that PoAs can also help changing the unbalanced geographical distribution of CDM projects so far.

PoAs enable project developers to cluster single project activities into programmes of a variable size. Further activities can be added at any time after registration of the overarching programme. A further advantage of this is that operators of the activities within the programme (CDM Programme Activities – CPAs) need not become project particitpants, the co-ordinating entity only must enter the CDM project cycle. This makes managing the Programme far easier, especially when compared to standard CDM project bundles. The simplified rules of the latter, moreover, are tied to certain emissions thresholds, whereas these do not exist for PoAs.

While the EB has developed a comprehensive set of PoA modalities and procedures by now, PoA development today is hampered by various factors, including institutional, regulatory as well as financial barriers.

Obstacles and barriers

Most EB guidance was developed based on the experience with conventional single-activity CDM projects. This led to a number of rulings not matching with the needs of large incentive schemes. For example, PoAs were allowed to use only one baseline and monitoring methodology per PoA, while for certain programmes this requirement proved too restrictive. The rules to prove additionality of PoAs took a long time to develop and the additionality requriements are still not fully clear as of today.

Another issue is how to deal with activities which were included wrongly into a programme. The current rules state that if a single project activity was added to a PoA in error, the corresponding credits have to be paid back by the designated operational entity that verified the emissions reduction. Validators have repeatedly complained that this causes unbearable liability risks for them. They claim the type of error is not properly defined and the time frame to identify such errors is far too wide.

Institutional capacity on the part of the host countries is a further barrier. Banks, energy agencies and utilities are quite often not used to managing, for example, large scale demand side energy efficiency programmes. Moreover, host country designated national authorities (DNA) are still not familiar enough with the current PoA framework.

Financial risks for the programme co-ordinator, however, remain the most important issues. The co-ordinating facility has to bear all the costs ranging from development, implementation, to operation of the Programme. Moreover, the first activities usually require seed funding in order to begin an incentive programme while at the same time, revenue from CERs is only one source of income. Banks are quite often hesitant to provide loans to PoAs as they have no experience with PoA funding and risk profiling appears difficult for them.

Reforming PoA Guidance

At its 47th meeting in 2009, the EB reformed the rules for PoAs. It is now possible for Programmes to use more than one methodology, provided the combination of the methodologies has been approved by the EB. On the question of additionality demonstration, the EB

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ruled that the start date of single activites must not lie prior to the validation of the overarching Programme. Yet, the question at which level additionality is to be demonstrated (programme or activity level) is still unclear. The Board will discuss this issue again at the oncoming session at the end of July of this year.

Moreover, many methodology-related problems remain. For example, PoAs replacing petroleum lamps with solar-powered lighting can use methodology AMS I. A. for the calculation of the baseline, this methodology requires the use of historical energy consumption figures for the lamps to be replaced. These data, however, are not available in many CDM host countries and conducting a survey is a time-consuming and expensive exercise.

In addition, the provision to combine methodologies still has its pitfalls: all activities within a PoA must use the methodology combination consistently. Thus, a PoA for small-scale hydropower plants in rural regions where an electricity grid exists in some areas (AMS I.D applicable) but not in others must submit and request registration of two different PoAs.

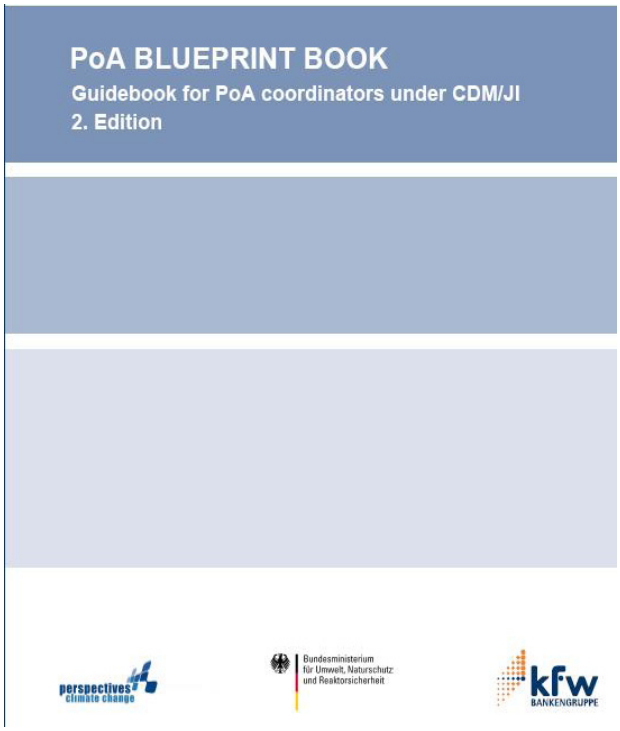
What is more, DOEs are still having problems with the guidance on erroneous inclusion of a specific activity to the PoA. They argue that their liability risks remain uncontrollable: for example, the EB can put a CPA under review even many years after its inclusion to the PoA, and a review of one CPA can cause a review of all other CPAs as well. Many validators, therefore, demand that their liability is to be limited to the first issuance of CERs for the activity in question.

Support facility for programme developers

A couple of support programmes have been initiated since the start of PoAs in order to support project developers. The PoA Centre Germany is a support facility initiated by the German Environment Ministry offering a wide range of services. The Center, established as part of the Ministry's CDM/JI-Initiative, aims at developing a portfolio of eligible PoAs, for which it is soliciting programme proposals. It offers advisory, structuring and assessment services for programme proposals as well as financing and grants to cover the preparation of programme concepts, project design documents (PDDs) and monitoring plans. Furthermore, the Center offers its know-how to help with programme implementation and can assist with marketing CER stemming from PoAs.

Inter alia, the Center has developed the *PoA Blueprint Book*, which contains sample programmes to aid potential Programme developers. It provides blueprints for six typical sectors: replacing lightbulbs with energy efficient lighting, replacement or reconditioning of household cookers, biogas plants for rural households, solar-powered hot water supply, industrial boilers and energy efficient building modernisation. A brief background is given on each sector along with information on methodological requirements, design options and financial issues. The second edition of the blueprint book was presented to the public at the Carbon Expo fair in May 2010. It features three additional case studies, two chapter on methodologies for small scale hydro and efficient chillers for industry.

The blueprint is available for download at:
www.kfw.de/carbonfund



Private actors vs. need of (public) seed money

A look at the global PoA pipeline shows a certain abstinence of the private sector. Only very few companies or private organisations are active here. Mostly, financing institutions working on PoAs are preparing the ground for PoA activities in close co-operation with host country organizations, sometimes with support of Annex I country DNAs. Especially, unilateral PoA initiatives are very rare.

Experiences gained during the first 18 months of the PoA Support Center at KfW demonstrate clearly the limits of economical attractiveness of most PoA project types which have been supported so far: in its PoA BluePrintBook, KfW explains transparently under which conditions certain project types could be deemed economical feasible by taking "break even point" and "Internal Rate of Return (IRR)" as simple indicators.

Depending on the national circumstances, baseline determination plays a crucial role in determining the rate of annual CER returns. Only with a relatively high baseline an attractive IRR can be achieved with a manageable number of installations per CPA. In this narrow sense, most cases in KfW's project pipeline

could be considered as economically feasible, although certainly not marketable in the sense that these projects could be driven by private companies' interest.

Therefore, one of the main conclusions in these early years of the programmatic CDM is the need for 'seed funding'. In most cases, the PoA coordinator cannot pre-finance the incentive at the beginning of a programme. He needs to look out for external funding from carbon buyers, which to date is rarely provided by private sector actors.

Limited economic incentives are not the only problem for making PoAs attractive for the private sector. Apart from the fact that only few companies are familiar with the CDM project cycle, the reliability of the PoA co-ordinator and the still existing restrictions of methodologies for the application in the programmatic CDM activities are additional barriers for involving the private sector. Most notably the PoA co-ordinator needs sufficient in-house capacity and regional acceptance to guarante a cost-efficient and effective programme performance through a centralized management structure and the integration of monitoring procedures in the normal business.

At this stage of the PoA development, institutional carbon buyers still have the function to implement lighthouse projects featuring as many project types as possible and to set up PoAs in as many countries as possible. Once this will be achieved, it becomes relatively easy for the private sector to add new CPAs to the existing PoAs. For the future development of the programmatic CDM, one should keep in mind that it will be difficult to get private companies to engage in the so far untapped sectors for the CDM, especially the buildings sector and the transport sector respectively. Therefore, seed money from government or multilateral institutions will continue to be needed to pave the way for these kinds of programmes.

NAMAs and other new flexible mechanisms

PoAs are not just a new and innovative option within the existing CDM. They are also the key to geographic regions and economic sectors where the classic CDM could not take root. Besides, they point beyond the CDM, being the first step towards the broader mechanisms leaving behind project levels, which will be needed in the future and which are currently discussed.

While the classic CDM is most successful in newly industrializing countries and large industrial or electricity generation projects, large numbers of PoAs are being developed in Africa (17%) – compared to 2% only for regular CDM projects. The broader use of PoAs expected to follow increasing stakeholders' familiarity with the approach will therefore help to reduce the geographical imbalances in offset project distribution.

Widespread use of PoAs would also move the carbon market from focusing on large single projects to viewing whole sectors and their potentials, especially in the untapped building and transport sector. This corresponds to the shift of the international debate on mechanisms from the CDM to so called "sectoral mechanisms" or Nationally Appropriate Mitigation Actions (NAMAs) in developing countries according to the Bali Action Plan.

However, the sectoral approaches and NAMAs so much en vogue recently have two severe shortcomings: neither is there a clear definition, nor is there, more discouraging even, any consensus about the financing of these activities. Thus for the time being it remains unclear how the provision of the Bali Action Plan (BAP) that NAMAs should be "supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner" shall be fulfilled.

In this regard, PoAs have the potential to pave the way in two respects:

- First, they are a prototype for sectoral activities which are measurable, reportable and verifiable. By broadening the approach – e.g. allowing the use of several methodologies and different methodology combinations in the CPAs of one PoA . PoAs can on the material level be most that is now discussed as sectoral approaches.
- Second, a functioning financing system is in place already, allowing to develop sectoral approaches that can be financed as PoAs as a no regret strategy. In an integrated approach, the ambition of PoAs can be enhanced by using below "BAU" baselines and more importantly by supplementing PoAs with other policy measures. An example would be PoA financed renovation of existing buildings, supplemented by obligatory energy efficiency standards for new buildings.

In the long run, climate policies worldwide will probably adopt a combination of emissions trading with other sectoral policies. MRVable policies will have to be complemented by other policy measures, such as educational campaigns, where mitigation cannot be quantified. PoAs can pioneer mobilizing the mitigation potentials of non-industry sectors such as agriculture, households, and transport.

In sum, PoAs and their legal framework need to be further developed and optimized. The slow start of Programmatic CDM should not prevent further efforts and investments into this project type. This applies even more as PoAs are ideal to address the current challenges of the carbon market: the programmatic CDM can open up new sectors, cover underrepresented geographic regions and pave a step-by-step way into the future of climate protection mechanisms.